

**REMARKS**

At the time of the Office Action dated July 30, 2003, claims 1-20 were pending in this application. Applicants acknowledge, with appreciation, the Examiner's allowance of claims 1-6 and 16-20. Applicants also acknowledge, with appreciation, the Examiner's indication that claims 8-13 contain allowable subject matter. Claim 8-9 and 12 have been amended to be placed in independent form and to include all of the limitations recited in independent claim 7, upon which claims 8-9 and 12 directly depend. Claim 7 has been amended to recite that one end of the extension section is open. Applicants submit that the present Amendment does not generate any new matter issue.

**Claims 7 and 14-15 are rejected under 35 U.S.C. § 102(b) for lack of novelty as evidenced by Bar-Nun et al., U.S. Patent No. 3,652,434 (hereinafter Bar-Nun)**

In the second enumerated paragraph of the Office Action, the Examiner asserted that Bar-Nun discloses a shock tube corresponding to that claimed. This rejection is respectfully traversed.

Claim 7 has been amended to recite that the extension section is open at an opposite end from where the driver section is connected to the extension section, consistent with Fig. 1b, which illustrates that the target is outside of the extension section opposite from where the extension section connects to the driver section, and thus, the extension section must be open for a shock wave generated by the driver section to reach the target. In contrast, Bar-Nun does not disclose the extension section 12 has an open end opposite to where the extension section 12 is

connected to the driver section 14. Instead, Bar-Nun teaches positioning a terminal plate 16 (column 3, lines 13-16) at the end opposite to where the extension section 12 is connected to the driver section 14. Thus, the shock wave of Bar-Nun does not exit the extension section 12. Instead, the "wave is reflected back to cause a further compression shock." Thus, Bar-Nun fails to identically disclose the claimed invention as recited in claim 7.

Furthermore, the valves referred to by the Examiner are not comparable to the active vent recited in claim 7. The valves connected to the extension/driven section 12 of Bar-Nun are referred to by reference numerals 22, 24, 26, 30 and 38. Applicants note that Bar-Nun teaches "[o]nce the tube has been evacuated, valve 24 is closed" (column 2, lines 71-72), and thus, valve 24 cannot act as an active vent. Bar-Nun also teaches that "[o]nce the desired pressure of the reactant gases is attained in the driven section, valves 22 and 26 are closed" (column 3, lines 4-6), and thus, valves 22 and 26 cannot act as an active vent. Bar-Nun further teaches that "[w]ater vapor is introduced ... through line 28, which is controlled by valve 30, this valve being closed when the desired volume of water vapor has been introduced into the driven section" (column 2, line 72 through column 3, line 1), and thus, valve 30 cannot act as an active vent. Finally, Bar-Nun teaches that "[i]mmmediately after the shock wave is produced as described above, valve 38 is opened so that the products can be withdrawn from the driven section" (column 3, lines 25-28), and thus, valve 38 cannot act as an active vent. As evidenced by these teachings in Bar-Nun, none of the valves 22, 24, 26, 30 and 38 are open when the shock wave is produced. As described on page 10 of Applicants' disclosure: "an active vent ... opens at the initiation of a positive pressure phase and closes near the end of the positive pressure phase or the beginning of the negative pressure phase." Since, none of the valves disclosed by Bar-Nun are open when the shock

wave is produced, none of these valves are capable of operating in the manner described above, and thus, the valves described by Bar-Nun fail to identically describe, within the meaning of 35 U.S.C. § 102, the claimed active vent. Applicants, therefore, respectfully solicit the withdrawal of the imposed rejection of claims 7 and 14-15 under 35 U.S.C. § 103 for lack of novelty based upon Bar-Nun.

Applicants have made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition for allowance. However, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. Accordingly, and in view of the foregoing remarks, Applicants hereby respectfully request reconsideration and prompt allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417, and please credit any excess fees to such deposit account.

Respectfully submitted,

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